SONY

34ピンインターフェイスボード

34PIN INTERFACE BOARD

SVBK-110

SERVICE MANUAL

補修部品表

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SECTION 1
GENERAL DESCRIPTION

1. OUTLINE

The SVBK-110 34-pin interface board is designed as an optional accessory for the SVO-9500MD/P videocassette recorder.
When this board is installed in the SVO-9500MD/P, the equipment having the 34-pin interface such as an ultrasonic device and the SVO-9500MD/P can be connected via the SVBK-110.

1-1. SPECIFICATIONS

Connector	34-pin multi connector x 1 Parallel control signal
Dimension	168 x 92 x 60 mm (w/h/d) ($6\frac{5}{8}$ x $3\frac{5}{8}$ x $2\frac{3}{8}$ inches)
Weight	300 g (11 oz)

Design and specifications subject to change without notice.

1. 概説

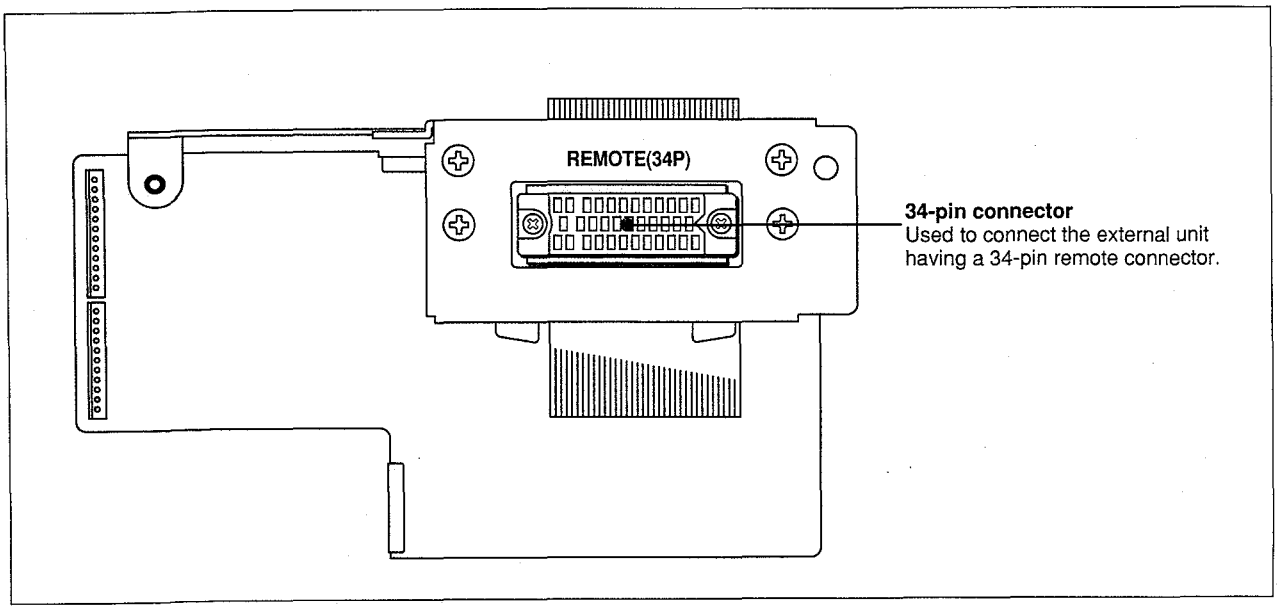
34ピンインターフェースボードSVBK-110は、ソニービデオカセットレコーダーSVO-9500MDの別売りアクセサリーです。
34ピンインターフェースを装備した超音波診断装置などの機器とSVO-9500MDを、本ボードを介して接続することができます。

1-1. 仕様

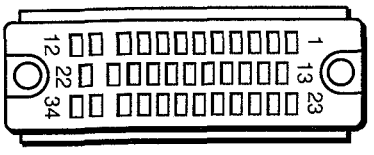
端子	34ピンマルチコネクター×1 パラレルコントロール信号
外形寸法	168×92×60mm (幅/高さ/奥行き)
重量	300g

仕様および外観は、改良のため予告なく変更することがありますが、ご了承ください。

1-2. LOCATIONS AND FUNCTIONS OF PARTS

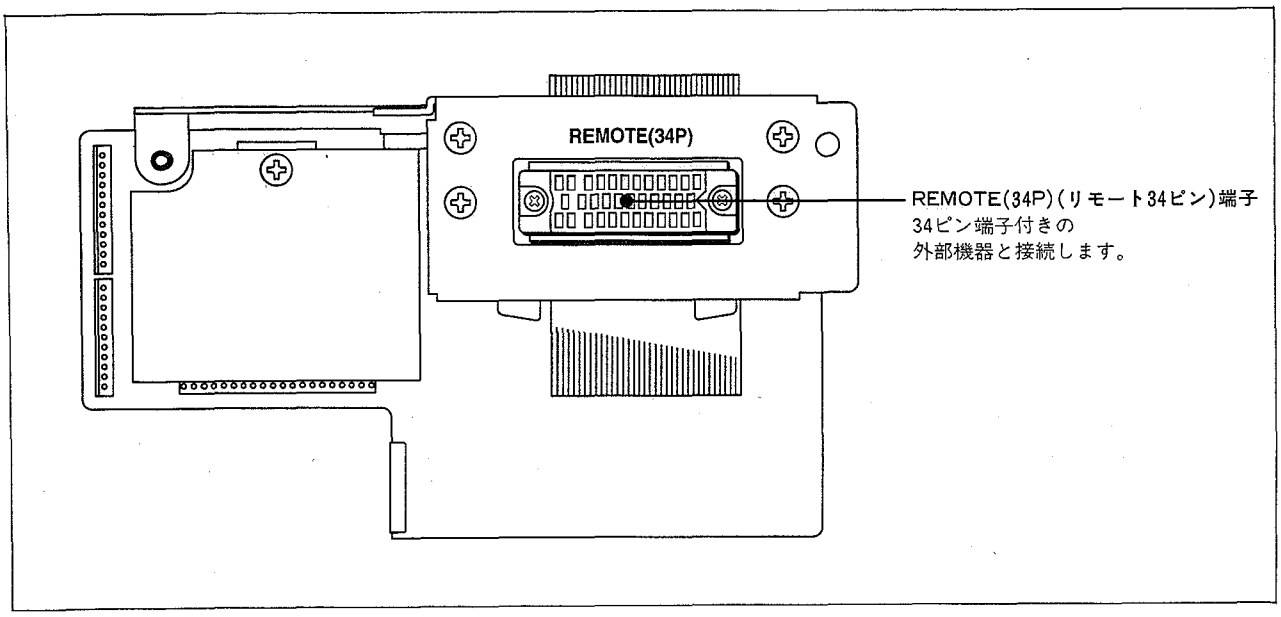


Pin assignment of the 34-pin connector

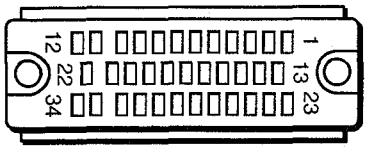


Pin No.	Signal	Pin No.	Signal
1	L : REC SW IN	18	PULSE OUT
2	L : PLAY SW IN	19	SPEED 1 IN
3	L : FF SW IN	20	H : TAPE TOP OUT
4	L : REW SW IN	21	L : EJECT SW IN
5	L : STOP SW IN	22	N. C.
6	N. C.	23	L : REC OUT
7	L : PAUSE SW IN	24	L : PLAY OUT
8	L : CASSETTE-IN OUT	25	L : FF OUT
9	GND	26	L : REW OUT
10	N. C.	27	N. C.
11	N. C.	28	N. C.
12	GND	29	L : PAUSE OUT
13	L : STEP SW IN	30	SPEED 2 IN
14	REV COUNT IN	31	N. C.
15	N. C.	32	N. C.
16	N. C.	33	SPEED 2 IN
17	REV SW IN	34	12V OUT (MAX 100 mA)

1-2. 各部の名称と働き



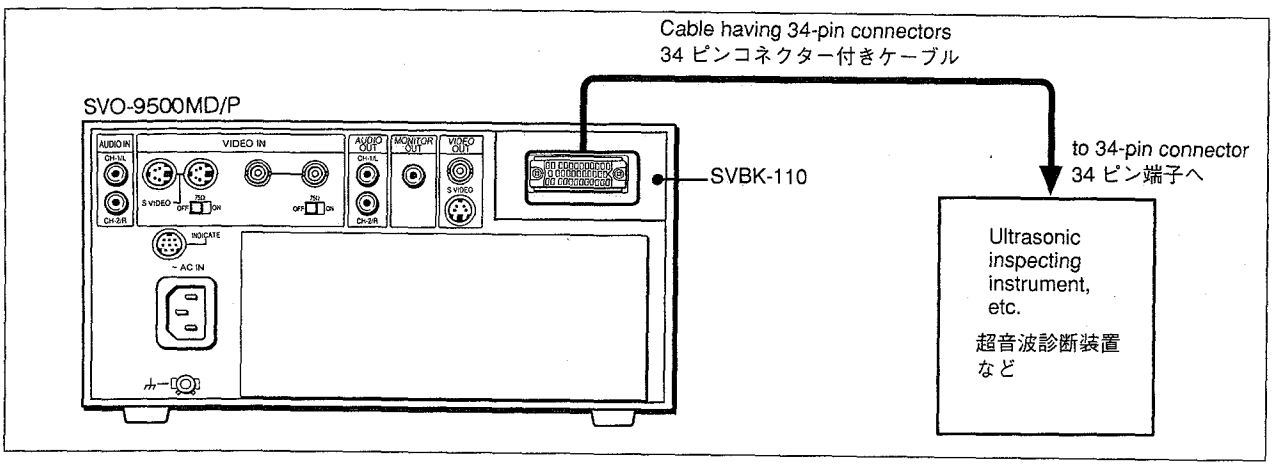
34ピン端子のピン配置



ピン番号	信　　号	ピン番号	信　　号
1	L : REC SW IN	18	PULSE OUT
2	L : PLAY SW IN	19	SPEED 1 IN
3	L : FF SW IN	20	H : TAPE TOP OUT
4	L : REW SW IN	21	L : EJECT SW IN
5	L : STOP SW IN	22	N. C.
6	N. C.	23	L : REC OUT
7	L : PAUSE SW IN	24	L : PLAY OUT
8	L : CASSETTE-IN OUT	25	L : FF OUT
9	GND	26	L : REW OUT
10	N.C.	27	N.C.
11	N.C.	28	N.C.
12	GND	29	L : PAUSE OUT
13	L : STEP SW IN	30	SPEED 2 IN
14	REV COUNT IN	31	N.C.
15	N.C.	32	N.C.
16	N.C.	33	SPEED 2 IN
17	REV SW IN	34	12V OUT (MAX 100mA)

1-3. CONNECTIONS

1-3. 接続



1-4. ATTACHING THE SVO-9500MD/P TO THE VTR

1. Remove the top panel of the VTR by unscrewing the 2 screws.
2. Remove the blank panel and the holder wire* of the VTR by unscrewing the 2 screws (+B3×6 and +BVTT3×6). (Fig. 1)
3. Cut the binding band on the harness with the nipper. (Fig.1)
4. Connect the 2 connectors of harness (11 pin, 12 pin to the 2 connectors on the RM-105 board of the SVBK-110 (CN551 (White) and CN552 (Red)) (Fig. 2)
5. Insert the 2 protrusions of the connector panel into the square holes of the rear panel. Insert the RM-105 board into the groove of the chassis (left).
6. Install the SVBK-110 with 4 screws (+B3×6). At the time install the hareness by using holder wire*, and put them into under the connector panel.
7. Install the top panel to the VTR with 2 screws.

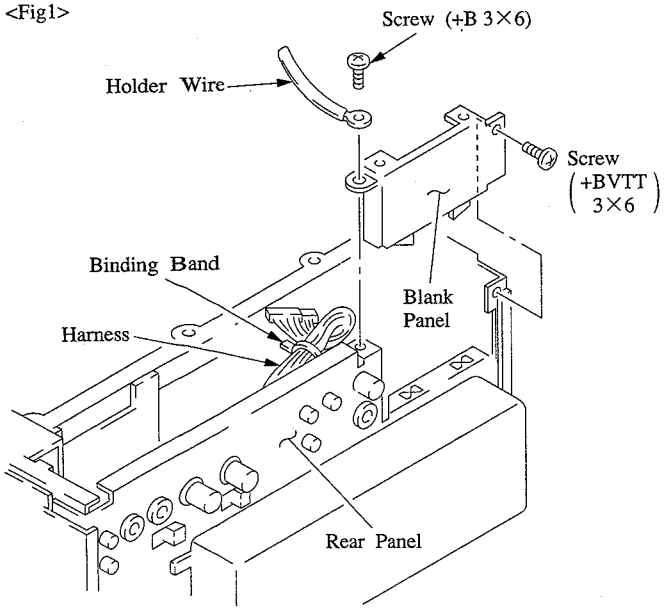
* If the holder wire doesn't belong in the supplied accessory of SVBK-110, use it from VTR side.

1-4. VTRへの取り付け方

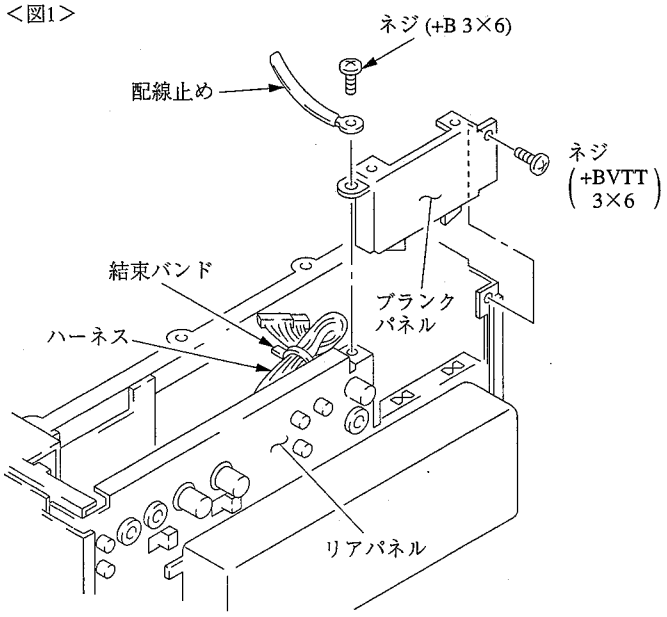
1. ネジ2本を取り外し、VTRの天板をはずす。
2. ネジ (+B3×6, +BVTT3×6) 2本を取り外し、ブランクパネル及び配線止め*をはずす。(図1)
3. ハーネスの結束バンドをニッパー等で切断する。(図1)
4. ハーネスのコネクター2ヶ (11ピン、12ピン) をSVBK-110のRM-105基板のコネクター2ヶ (CN-551 (白), CN-552 (赤)) に接続する。(図2)
5. コネクターパネルの突起2箇所をリアパネルの角穴に入れ、RM-105 基板をシャーシ (左)の溝に入れる。(図2)
6. 付属品のネジ (+B3×6) 4本で取り付ける。この際、ハーネスを配線止め*により処理し、コネクターパネルより下に入れこむ。(図2)
7. VTRの天板を取り付ける。

* 配線止めがSVBK-110に付属されていない場合は、VTR側の配線止めを御使用下さい。

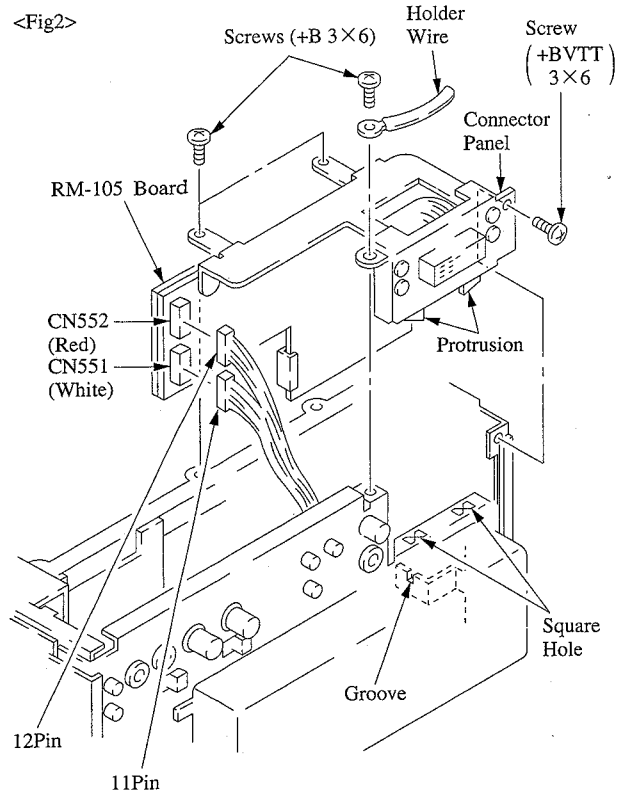
<Fig1>



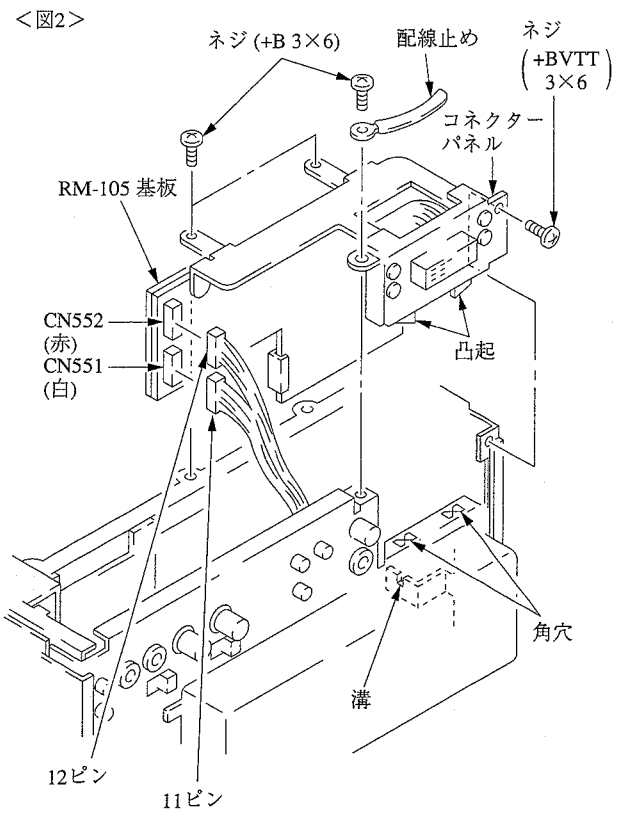
<図1>



<Fig2>



<図2>



1-5. Precautions on maintenance

(1) Safety Related on Components Warning
Components identified by shading marked and ⚠ marked on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony Parts whose part numbers appear as shown in this manual or in Service bulletins and service manual supplement published by Sony.

(2) Standardization of Parts
Repair parts supplied from Sony Parts Center may not be always identical with the part which actually in use due to "accommodating the improved parts and/or enginneering changes" or "standardization of genuine parts". This manual's exploded views and electrical spare parts list are indicating the parts number of "the standardization genuine parts at present".

(3) Stocked of Parts
The parts marked with "S" in the SP column of the exploded views and electrical spare parts list are normally required for routine service work. Order for parts marked with "O" will be processed, but allow for additional delivery time.

1-5. 補修用部品番号注意事項

1. 回路図、分解図、電気部品リスト中で ⚠ 印の部品は、安全性を維持するために重要な部品です。従って、これらの部品を交換する時には必ず指定の部品と交換して下さい。

2. パーツセンターから供給される部品は、実際にセットに使用している部品と形状が異なることが時々あります。これらは「部品の共通化」等によるものです。

3. 分解図、電気部品リスト中SP欄がOで示されている部品は交換頻度が低い部品ですので、在庫していないことがあり、納期が長くなることがあります。

SECTION 2
SEMICONDUCTOR PIN ASSIGNMENT

ここに記載されているIC、トランジスタ、ダイオードは、それぞれの機能を等価的に表したものです。したがって互換性を表すものではありません。(互換性のない型名が併記されている事もあります。) 部品の交換をする時は、SPARE PARTS の章を参照して下さい。

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

IC **PAGE**

MB88505PF.....2-2
MC14093BCP.....2-3
TC4069UBP 2-3

TRANSISTOR

DTC143TS.....2-3

DIODE

10E-2.....2-3
1SS119 2-3

等価回路はICメーカーのData Bookに従いました。

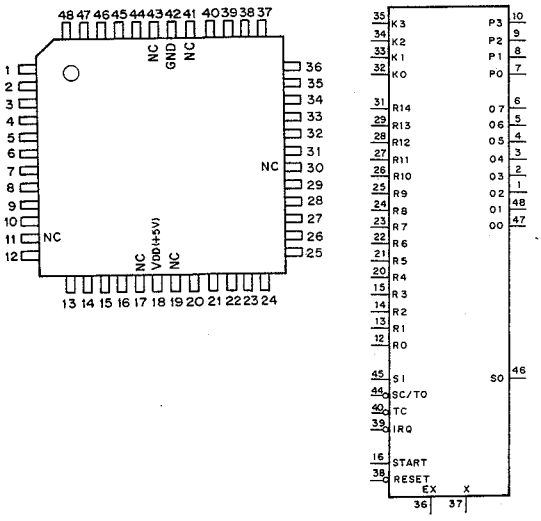
The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

IC

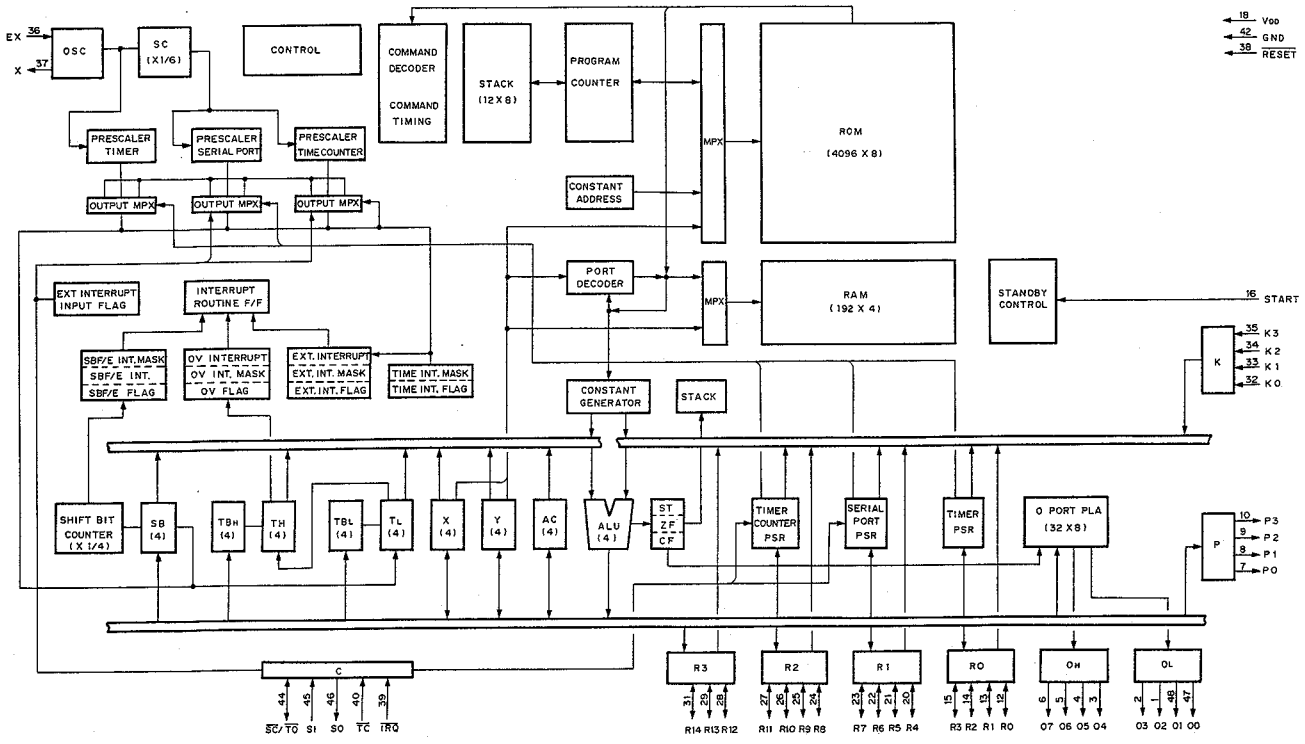
MB88505PF (FUJITSU) FLAT PACKAGE

C-MOS 4-BIT ONE-CHIP MICROCOMPUTER

– TOP VIEW –



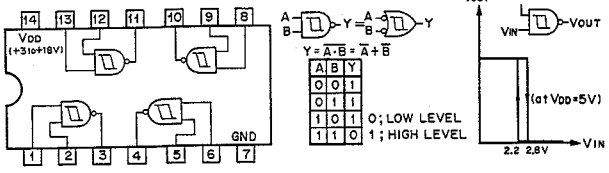
EX	; EXTERNAL CLOCK IN
$\overline{IRQ}$	; INTERRUPT REQUEST IN
KO-K3	; 4-BIT PARALLEL IN
00-07	; 4-BIT PARALLEL OUT
PO-P3	; 4-BIT PARALLEL OUT
RO-R14	; DATA IN/OUT
$\overline{RESET}$	; RESET IN
$\overline{SC}/\overline{TO}$	; SHIFT CLOCK IN/INT TIMING OUT
SI	; SERIAL DATA IN
SO	; SERIAL DATA OUT
START	; STANDBY OFF IN
$\overline{TC}$	; EXTERNAL CLOCK IN FOR COUNTER
X	; CLOCK OUT



MC14093BCP (MOTOROLA)

C-MOS 2-INPUT NAND SCHMITT TRIGGER

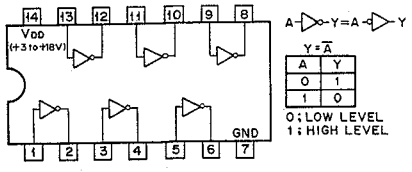
– TOP VIEW –



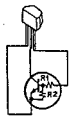
TC4069UBP (TOSHIBA)

C-MOS INVERTER

– TOP VIEW –

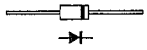


TRANSISTOR



DTC143TS (R1 = 4.7K, R2 = OPEN)

DIODE



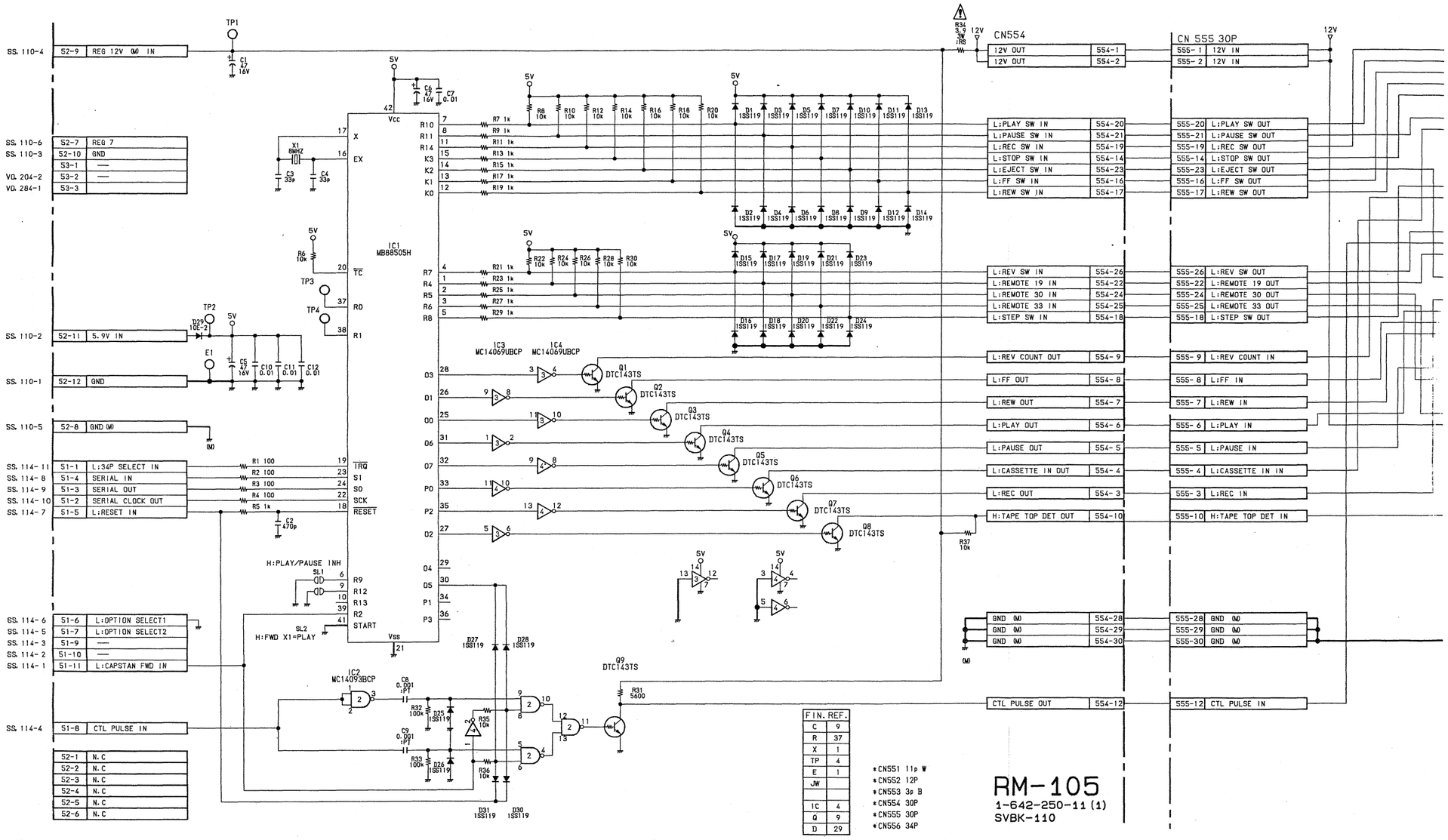
10E-2
1SS119

SECTION 3
PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

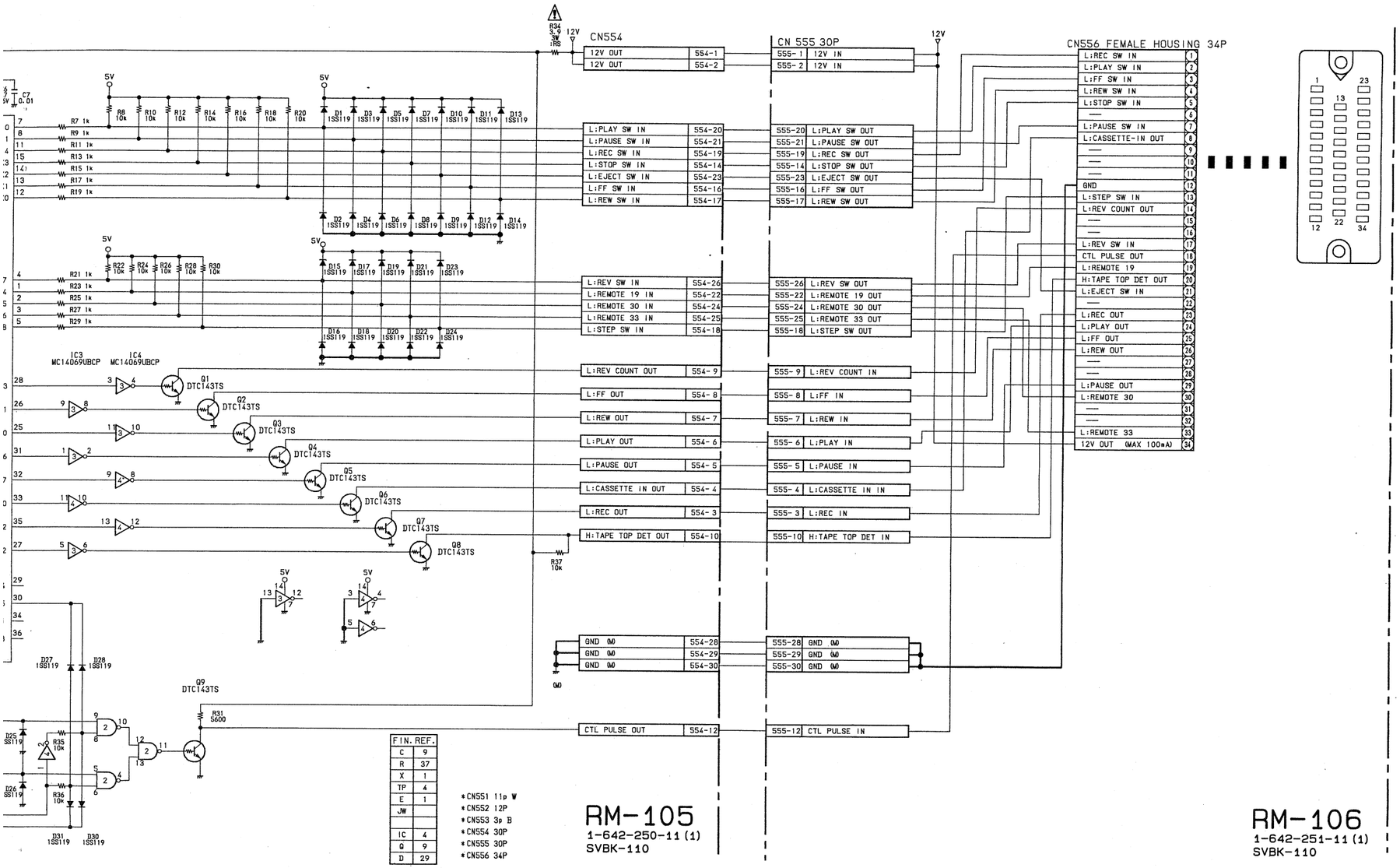
RM-105, RM-106 RM-105, RM

SVBK-110; 34-PIN INTERFACE BOARD

(RM-105 Board)
(RM-106 Board)


SS. 110-4 S2-9 REG 12V ON IN
SS. 110-6 S2-7 REG 7
SS. 110-3 S2-10 GND
S3-1 —
VO. 204-2 S3-2 —
VO. 284-1 S3-3
SS. 110-2 S2-11 5.9V IN
SS. 110-1 S2-12 GND
SS. 110-5 S2-8 GND ON
SS. 114-11 S1-1 L:34P SELECT IN
SS. 114-8 S1-4 SERIAL IN
SS. 114-9 S1-3 SERIAL OUT
SS. 114-10 S1-2 SERIAL CLOCK OUT
SS. 114-7 S1-5 L:RESET IN
SS. 114-6 S1-6 L:OPTION SELECT1
SS. 114-5 S1-7 L:OPTION SELECT2
SS. 114-3 S1-9 —
SS. 114-2 S1-10 —
SS. 114-1 S1-11 L:CAPSTAN FWD IN
SS. 114-4 S1-8 CTL PULSE IN
S2-1 N.C
S2-2 N.C
S2-3 N.C
S2-4 N.C
S2-5 N.C
S2-6 N.C
IC1 MB88505H
IC2 MC14093BCP
IC3 MC14069UBCP
IC4 MC14069UBCP
H:PLAY/PAUSE INH
H:FWD X1=PLAY
CN554
CN555 30P
12V OUT 554-1 555-1 12V IN
12V OUT 554-2 555-2 12V IN
L:PLAY SW IN 554-20 555-20 L:PLAY SW OUT
L:PAUSE SW IN 554-21 555-21 L:PAUSE SW OUT
L:REC SW IN 554-19 555-19 L:REC SW OUT
L:STOP SW IN 554-14 555-14 L:STOP SW OUT
L:EJECT SW IN 554-23 555-23 L:EJECT SW OUT
L:FF SW IN 554-16 555-16 L:FF SW OUT
L:REW SW IN 554-17 555-17 L:REW SW OUT
L:REV SW IN 554-26 555-26 L:REV SW OUT
L:REMOTE 19 IN 554-22 555-22 L:REMOTE 19 OUT
L:REMOTE 30 IN 554-24 555-24 L:REMOTE 30 OUT
L:REMOTE 33 IN 554-25 555-25 L:REMOTE 33 OUT
L:STEP SW IN 554-18 555-18 L:STEP SW OUT
L:REV COUNT OUT 554-9 555-9 L:REV COUNT IN
L:FF OUT 554-8 555-8 L:FF IN
L:REW OUT 554-7 555-7 L:REW IN
L:PLAY OUT 554-6 555-6 L:PLAY IN
L:PAUSE OUT 554-5 555-5 L:PAUSE IN
L:CASSETTE IN OUT 554-4 555-4 L:CASSETTE IN IN
L:REC OUT 554-3 555-3 L:REC IN
H:TAPE TOP DET OUT 554-10 555-10 H:TAPE TOP DET IN
GND ON 554-28 555-28 GND ON
GND ON 554-29 555-29 GND ON
GND ON 554-30 555-30 GND ON
CTL PULSE OUT 554-12 555-12 CTL PULSE IN
FIN. REF.
C 9
R 37
X 1
TP 4
E 1
JW
IC 4
Q 9
D 29
*CN551 11p W
*CN552 12P
*CN553 3p B
*CN554 30P
*CN555 30P
*CN556 34P
RM-105
1-642-250-11 (1)
SVBK-110

NOTE:
The ⚠-marked components are critical to sefety.
Replace only with same components as specified.



RM-105
1-642-250-11 (1)
SVBK-110

RM-106
1-642-251-11 (1)
SVBK-110

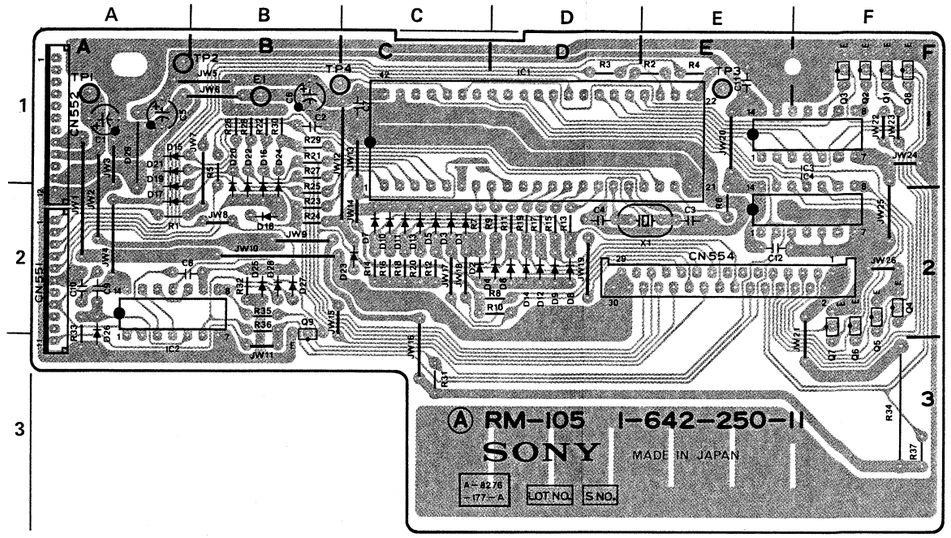
RM-105, RM-106

SVBK-110: 34-PIN INTERFACE BOARD
(RM-105 Board
RM-106 Board)

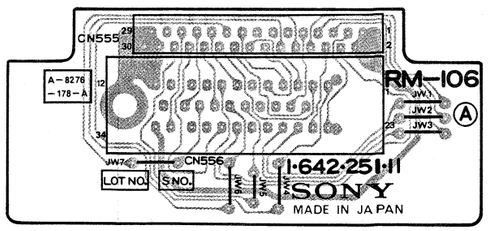
SVBK-110

RM-105 (1-642-250-11)

CN551	A-2
CN552	A-1
CN554	E-2
D1	C-2
D2	C-2
D3	C-2
D4	C-2
D5	C-2
D6	D-2
D7	C-2
D8	D-2
D9	D-2
D10	C-2
D11	C-2
D12	D-2
D13	C-2
D14	D-2
D15	A-1
D16	B-1
D17	A-2
D18	B-2
D19	A-1
D20	B-1
D21	A-1
D22	B-1
D23	C-2
D24	B-1
D25	B-2
D26	A-3
D27	B-2
D28	B-2
D29	A-1
E1	B-1
IC1	D-1
IC2	A-3
IC3	F-1
IC4	F-1
Q1	F-1
Q2	F-1
Q3	F-1
Q4	F-2
Q5	F-3
Q6	F-3
Q7	F-3
Q8	F-1
Q9	B-2
TP1	A-1
TP2	B-1
TP3	E-1
TP4	B-1
X1	E-2



RM-105 -A SIDE-
1-642-250-11 (1)
SVBK-110



RM-106 -A SIDE-
1-642-251-11 (1)
SVBK-110

A Side is the same as COMPONENT Side.

3-3

SECTION 4
SPARE PARTS

4-1. PARTS INFORMATION

(1) The ⚠ -marked components are critical to safety. Replace only with the same components as specified.

(2) Replacement parts supplied from the Sony Parts Center will sometimes have a different shape and outside view from the parts which are used in the unit. This is due to "accommodating improved parts and/or engineering changes" or "standardization of genuine parts".
- This manual's exploded views and electrical spare parts lists indicate the part numbers of "the present standardized genuine parts".
- Regarding engineering part changes by our engineering department, refer to Sony service bulletins and service manual supplements.

(3) The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" with be processed, but allow for additional delivery time.

(4) Item with no part number and/or no description are not stocked because they are seldom required for routine service.

(5) All resistors are in ohms.

注意1. 分解図, 電気部品リスト中, SP欄でSが示されている部品は常時在庫します。
SP欄がOで示されている部品は交換頻度が低い部品ですので在庫しないことがあり, 納期が長くなることがあります。

注意2. リスト, 分解図中で⚠印のついている部品は安全性を維持するために重要な部品です。従って交換する時は必ず指定の部品を使って下さい。

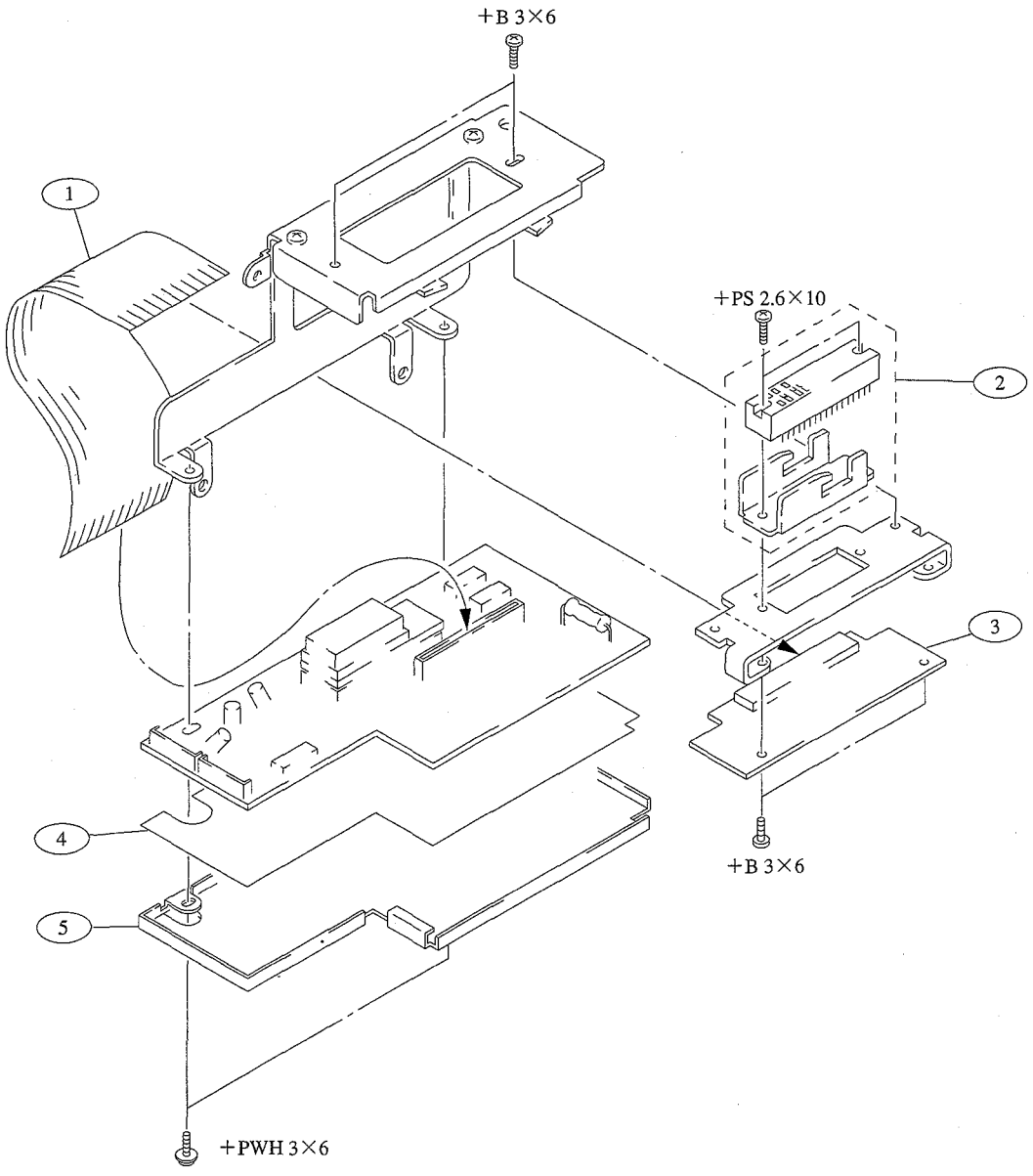
注意3. この価格表に示されている部品は工場から出荷された製品に実装されている部品とは異なることがあります。
- 「部品の共通化」又は「工場での設計変更」によるものです。
- 工場での設計変更については別途発行のテクニカルニュースを参照して下さい。

注意4. 電気部品は基板ごとに構成されており, 部品順序はRef.No.のアルファベット順になっています。

注意5. 抵抗で単位のないものは全てΩです。

注意6. この価格表に掲載されている表示価格は, 消費税抜きです。

4-2. EXPLODED VIEW



No.	Part No.	SP	Descripttion	価格 (税別)
1	1-558-261-31	s	WIRE, FLEXIBLE CARD	D
2	1-563-633-11	o	CONNECTOR, FLEXIBLE 30P	D
3	1-642-251-11	o	PRINTED CIRCUIT BOARD, RM-106	
4	3-174-281-01	o	SHEET, INSULATING	E
5	3-174-284-01	o	CASE, SHIELD	G

4-3. ELECTRICAL PARTS LIST

RM-105 BOARD

Ref. No. or Q'ty	Part No.	SP	Description	価格
C1	1-124-477-11	s	ELECT 47uF 20% 25V	A
C2	1-162-290-31	s	CERAMIC 470PF 10% 50V	A
C3	1-162-211-31	s	CERAMIC 33PF 5% 50V	A
C4	1-162-211-31	s	CERAMIC 33PF 5% 50V	A
C5	1-124-477-11	s	ELECT 47uF 20% 25V	A
C6	1-124-477-11	s	ELECT 47uF 20% 25V	A
C7	1-161-379-00	s	CERAMIC 0.01uF 20% 25V	A
C8	1-130-471-00	s	MYLAR 0.001uF 5% 50V	A
C9	1-130-471-00	s	MYLAR 0.001uF 5% 50V	A
C10	1-161-021-11	s	CERAMIC 0.047uF 10% 25V	A
C11	1-161-021-11	s	CERAMIC 0.047uF 10% 25V	A
C12	1-161-021-11	s	CERAMIC 0.047uF 10% 25V	A
CN551	1-506-476-11	s	CONNECTOR, 11P, MALE	D
CN552	1-506-477-11	s	CONNECTOR, 12P, MALE	D
CN554	1-563-607-11	s	CONNECTOR, FLEXIBLE 30P	C
CNI1	1-526-663-00	o	SOCKET, IC (DP) 42P	M
D1	8-719-911-19	s	DIODE 1SS119	A
D2	8-719-911-19	s	DIODE 1SS119	A
D3	8-719-911-19	s	DIODE 1SS119	A
D4	8-719-911-19	s	DIODE 1SS119	A
D5	8-719-911-19	s	DIODE 1SS119	A
D6	8-719-911-19	s	DIODE 1SS119	A
D7	8-719-911-19	s	DIODE 1SS119	A
D8	8-719-911-19	s	DIODE 1SS119	A
D9	8-719-911-19	s	DIODE 1SS119	A
D10	8-719-911-19	s	DIODE 1SS119	A
D11	8-719-911-19	s	DIODE 1SS119	A
D12	8-719-911-19	s	DIODE 1SS119	A
D13	8-719-911-19	s	DIODE 1SS119	A
D14	8-719-911-19	s	DIODE 1SS119	A
D15	8-719-911-19	s	DIODE 1SS119	A
D16	8-719-911-19	s	DIODE 1SS119	A
D17	8-719-911-19	s	DIODE 1SS119	A
D18	8-719-911-19	s	DIODE 1SS119	A
D19	8-719-911-19	s	DIODE 1SS119	A
D20	8-719-911-19	s	DIODE 1SS119	A
D21	8-719-911-19	s	DIODE 1SS119	A
D22	8-719-911-19	s	DIODE 1SS119	A
D23	8-719-911-19	s	DIODE 1SS119	A
D24	8-719-911-19	s	DIODE 1SS119	A
D25	8-719-911-19	s	DIODE 1SS119	A
D26	8-719-911-19	s	DIODE 1SS119	A
D27	8-719-911-19	s	DIODE 1SS119	A
D28	8-719-911-19	s	DIODE 1SS119	A
D29	8-719-200-02	s	DIODE 10E2	A
D30	8-719-911-19	s	DIODE 1SS119	A
D31	8-719-911-19	s	DIODE 1SS119	A
IC1	8-759-060-37	s	IC MB88P505H-101PF-5246	Q
IC2	8-759-000-58	s	IC MC14093BCP	C
IC3	8-759-240-69	s	IC TC4069UBP	B
IC4	8-759-240-69	s	IC TC4069UBP	B
Q1	8-729-900-74	s	TRANSISTOR DTC143TS	A
Q2	8-729-900-74	s	TRANSISTOR DTC143TS	A
Q3	8-729-900-74	s	TRANSISTOR DTC143TS	A
Q4	8-729-900-74	s	TRANSISTOR DTC143TS	A
Q5	8-729-900-74	s	TRANSISTOR DTC143TS	A

(RM-105 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description	価格
Q6	8-729-900-74	s	TRANSISTOR DTC143TS	A
Q7	8-729-900-74	s	TRANSISTOR DTC143TS	A
Q8	8-729-900-74	s	TRANSISTOR DTC143TS	A
Q9	8-729-900-74	s	TRANSISTOR DTC143TS	A
R1	1-249-405-11	s	CARBON 100 5% 1/4W	A
R2	1-249-405-11	s	CARBON 100 5% 1/4W	A
R3	1-249-405-11	s	CARBON 100 5% 1/4W	A
R4	1-249-405-11	s	CARBON 100 5% 1/4W	A
R5	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R6	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R7	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R8	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R9	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R10	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R11	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R12	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R13	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R14	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R15	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R16	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R17	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R18	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R19	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R20	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R21	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R22	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R23	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R24	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R25	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R26	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R27	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R28	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R29	1-249-417-11	s	CARBON 1K 5% 1/4W	A
R30	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R31	1-249-426-11	s	CARBON 5.6K 5% 1/4W	A
R32	1-249-441-11	s	CARBON 100K 5% 1/4W	A
R33	1-249-441-11	s	CARBON 100K 5% 1/4W	A
R34	⚠1-216-396-11	s	METAL 3.9 5% 3W	A
R35	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R36	1-249-429-11	s	CARBON 10K 5% 1/4W	A
R37	1-249-429-11	s	CARBON 10K 5% 1/4W	A
X1	1-567-132-00	s	RESONATOR, CERAMIC 8.00MHz	D

RM-106 BOARD

Ref. No. or Q'ty	Part No.	SP	Description	価格
1pc	1-642-251-11	o	PRINTED CIRCUIT BOARD, RM-106	
2pcs	7-682-547-04	s	SCREW +B 3X6	ZZ
2pcs	7-628-254-30	s	SCREW +PS 2.6X10	ZZ
CN555	1-563-633-11	o	CONNECTOR, FLEXIBLE 30P	D
CN556	1-580-745-21	s	HOUSING, FEMALE 34P	K

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP	Description	価格
1pc	3-754-695-11	s	MANUAL, INSTRUCTION	H